

7. SOME OBSERVATION ON WILD BUFFALO, *BUBALUS BUBALIS* LINN., IN KAZIRANGA NATIONAL PARK, ASSAM

INTRODUCTION

There is now a need to determine how far the pure wild strain of the Buffalo in the Kaziranga Sanctuary has been affected by domestic strains. The confusion that has prevailed is evident from the fact that several forms were recognised in earlier literature, such as Blanford (1891) who listed four varieties on the basis of horn shape, colour and size, namely:

A. *Colour Blackish:*

- (a) Horns sub-circular *B. b. bubalis*
- (b) Horns directed mainly outward
B. b. macroceros

B. *Colour brown dun:*

B. b. fulvus

C. *Size medium:*

B. b. hosei

In March 1980, we made an attempt to find answers for the queries that have been often raised in the context of the wild buffalo population at Kaziranga National Park, such as:

- (a) How many forms of wild buffalo occur in Kaziranga National Park?
- (b) Do feral buffaloes occur in Kaziranga and if so, their identity from the wild stock?
- (c) How many of the estimated population of six hundred + wild buffaloes in Kaziranga are really wild?
- (d) Do wild buffalo stock mix freely with the feral ones?

We concentrated our efforts in the Baguri Block of the Sanctuary which is a favoured habitat of the buffalo. Of the estimated 660 buffaloes in Kaziranga in 1978 (census by forest department) about 50% was accounted for from Baguri Block. This situation is probably of the extensive grasslands.

We were in Kaziranga National Park from 19 to 24th March, 1980. During this period, we followed buffalo herds on elephant back from dawn to dusk. The observation period was from 6 a.m. to 6 p.m. with afternoon break of 3 hours. Two trained elephants, a male, and a female were hired by us from the Forest Department for six days, and we had a total of 56 hours of observation.

We transected the forest on elephant back in single file. The buffalo herds when sighted were approached carefully. The herd on seeing us would turn towards us stand in alert attentive posture, staring with raised head often for an hour or more. During our observation when we approached certain buffalo herds to within about 500 metres, the whole herd would bold to cover in tall reeds. With other herds we could steadily approach them and station our two elephants right in the midst of the herd. In the remote northern end of the Park, we followed a large herd of 50 buffalo as close as 10 metres.

The herd strength, composition, build, colour and behaviour were noted. We observed several such herds and noted the behaviour when the herd had not located us, when the herd located our position, reaction to our approached, behaviour when we stationed our elephants right in their midst. Behaviour when the herd was moving from one bheel towards another, resting behaviour reaction to disturbance, cow and calf relation, and the behaviour of solitary bulls.

Spots where a particular herd was sighted earlier was revisited to note if that herd kept to the same territory. Villages surrounding the Kaziranga Park were visited to collect infor-

mation on possible occurrence of feral buffaloes.

RESULTS

In the 6 days of actual field work we spotted 300 + wild buffaloes in the study area.

The herd ranged from 8 to 20 individuals. However, at Borbeel a larger herd of over 40 individuals were sighted. The herd composition was adult females, sub-adult males and females and in two instances adult bulls.

At Baithamari bheel a herd of 19 individuals were sighted (9 females + 6 sub-adults + 4 cows). The animals were blackish grey with sub-circular horns and were of large size. In forenoon, when we were one kilometre away from the herd located our position.

On sighting us the herd turned towards us, with head raised, and alertly stared at us. Twenty minutes later we moved towards the herd and reached the edge of the Baithamari Bheel, the buffaloes which were at this stage 300 metres away across the bheel bolted and took cover in the tall reeds growing at the edge of the grass patch.

After a lapse of 20 minutes the herd returned to the bheel and continued to be there when we left the site an hour later. In the afternoon we observed the herd still at the same bheel when we watched them from a concealed observation site. The entire herd was resting excepting two sub-adults and 2 calves which were grazing leisurely. Our observations showed that some buffalo herds like the above one at Baithamari Bheel stare at an intruder for a long time and on closer approach flee to the cover of tall reeds. Smaller buffalo groups, in twos and threes (cows and calves), were inclined to panic and not permit close approach. Solitary bulls invariably fled to cover on sighting us even from a distance of our 800-1000 metres.

At Danga bheel a herd of 17 individuals were sighted (9 adult females, 6 sub-adults and 2 calves). The animals were medium sized, dun coloured and had horns mainly directed outwards but a few had sub-circular horns. The herd sighted us when we were 200 metres from them and on the same side of Danga bheel. On sighting us all the individuals excepting a few cows turned towards us, with their head raised and stood staring at us. The cows continued grazing. After 15 minutes we approached the herds steadily and our two elephants were soon stationed in the midst of the herd. Excepting sub-adult females all individuals resumed grazing. One male sub-adult (horn c. 30 cm) suckled from an adult cow for over an hour hardly a few metres away from us. We had similar experience with a large herd of 50 + animals at Borbheel.

Our observations on some buffalo herds like the one sighted at Danga bheel indicated that the individuals were less shy and less inclined to panic, so much so that we could steadily move amidst a herd of over 20 animals. After sometime the older cows and some juveniles, continued their grazing and lost all interest in us. The herds mentioned above invariably were of dun colour.

Our enquiries with villagers in villages on the margins of the Kaziranga Park revealed that there are over 200 animals in the park which have come from Shivsagar area on the northern periphery of the park. These animals identified as "Nepals" by locals, had taken shelter in the Park during high floods in 1976 (?) and since then, had run wild. These feral herds are known to mix with domestic ones and often follow them into the villages. Four such feral ones captured and tamed in 1979 were seen by us.

Some of these dun coloured animals have settled along the southern margin of the park

near Baguri Rest House. Similar herds were encountered by us in the western part of the National Park near Kanchanjuri area. We noted two conspicuous whitish hair band one inch wide and 4 inch apart, on throat of all the individuals in the herd sighted by us at Danga Bheel. Similar whitish throat bands were noted on all four individuals, caught and tamed by the villagers.

SUMMARY OF FINDINGS

Buffalo herds with blackish colour and also herds with dun colour were seen in Kaziranga. They also showed different behaviour, that is, buffaloes with blackish colour fled on approach whereas the dun coloured ones were not inclined to panic. The dun coloured buffaloes were encountered within the entire study area.

Two whitish, one inch wide, four inch apart throat bands were seen on the dun colour

buffalo herds. These bands are not recorded by earlier observers.

The situation in Kaziranga National Park warrants a systematic study of wild buffalo, particularly their genetic status. We opine that large number of domestic buffaloes have been let loose in the park area. Many may be now feral and this is not a desirable state as ultimately their presence will lead to deterioration of the wild stock.

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8. CAUSES OF MORTALITY IN MAMMALS OF BOVIDAE FAMILY IN CAPTIVITY AND FREE LIVING STATE IN INDIA

Diseases of wild ungulates have considerable epidemiological and ecological significance. Apart from having a direct impact on the wildlife populations themselves, the occurrence of communicable diseases in some of the species, constitute a great hazard to domestic livestock populations, particularly in areas where such diseases have been controlled or eradicated. In order to have effective disease control programmes, both in wild and domestic stock, it is essential to know the natural nidi and host range of various infectious agents.

The infectious diseases of Bovidae reported in India are Rinderpest in gaur, wild buffalo, nilgai, chousingha, Black buck (Hallen *et al.* 1871, Burton 1953, Schaller 1967, Gupta and Verma 1949), Anthrax (Peacock 1933), Foot and Mouth Disease (Ali 1935), tuberculosis in captive antelopes and sheep (Liston and Soparkar 1924) etc. Reports of parasitic infestations in Bovidae are scanty (Pande *et al.* 1970, Patnaik and Acharjyo 1970, Sen Gupta 1974).

This paper describes the causes of mortality among various species of Bovidae family en-